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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/685,154	10/10/2000	Claudia J. Quigley	105690-136 (MKS-78)	4588

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EXAMINER

FERGUSON, MARISSA L

ART UNIT	PAPER NUMBER
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2855

DATE MAILED: 06/06/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/685,154

Applicant(s)

QUIGLEY ET AL.

Examiner

Marissa L Ferguson

Art Unit

2855

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

Claims 1-5, 7-17, 19-21, 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pandorf et al. (U.S. Patent 5,932,332). Pandorf et al. teaches the claimed invention as follows: shell (216), pressure sensor disposed in the shell (220 and Abstract), heater (218) attached to the shell (Column 6, Lines 62-65) including first and second heating elements (232a, 232b), one or more electrical components for applying electrical signal (220, 220a), first and second heating elements connected in series (262, 264, and Column 19, Lines 15-66), conductive flexible diaphragm (210b), the method of heating at least a portion of a pressure transducer (Column 20, Lines 16-34), first and second heaters comprising and coupled to first and second heating elements (220d, 262), first and second heaters applying heat to the shell/pressure sensor (Column 20, Lines 16-34), and applying the electrical signal to first and second heating elements during a first period of time and a second period of time following (Column 20, Lines 35-67 and Column 21, Lines 1-35). However, he does not explicitly disclose the different resistances.

Pandorf discloses the first and second electrical resistances. However, he does not explicitly disclose that the resistances are equal or are different to each other.

As best understood, the reference discloses an equation of total resistance. If the total resistance is equal to the first resistance then the second resistance would also be equal. Referring to the different resistances, it should be obvious that the circuit arrangement can be changed in various ways.

Therefore, it would have been obvious at the time of the invention to include in Pandorf the different resistances if desired enhancing the operation of a pressure sensor.

2. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pandorf et al. (U.S. Patent 5,932,332) in view of Johnston (U.S. Patent 4,176,557). Pandorf et al. teaches the invention claimed except, he does not explicitly disclose that the first and second heating elements are connected in parallel.

Johnston discloses that the first and second heating elements are connected in parallel (Column 7, Lines 58-68 and Column 8, Lines 1-20).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the invention taught by Pandorf et al. to the elements taught by Johnston for the purpose of providing electrical connections between the heating elements.

3. Claims 18 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pandorf et al (U.S. Patent 5,932,332) in view of Rickner (U.S.

Patent 2,753,515). Pandorf et al teaches the invention claimed except, he does not explicitly disclose the switching element. Rickner discloses the switching element (Column 1, Lines 19-20 and Column 2, Lines 47-50).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the invention taught by Pandorf et al. to the element taught by Rickner for the purpose of converting a change in a pressure differential.

Response to Arguments

4. Applicant's arguments filed 3/19/02 with respect to claims 6, 18, and 22 have been fully considered but they are not persuasive.

5. Applicant argues that with respect to claim 1, the two heaters are both attached to the shell, however examiner notices that the applicant does not claim that both are attached only that a heater is attached to the shell. The reference does disclose a heater attached to the shell.

6. Applicant argues that with respect to claims 18 and 22, the operating temperatures vary by reconfiguring electrical jumpers. The examiner notices that electrical jumpers are not within the claim limitations. The claim states that a switching element connects the heater elements and not specifically electrical jumpers.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marissa L Ferguson whose telephone number

is 703-305-3194. The examiner can normally be reached on (M-F) 7:30am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Benjamin R Fuller can be reached on 703-308-0079.

Marissa L Ferguson
Examiner
Art Unit 2855

June 3, 2002



Benjamin R. Fuller
Supervisory Patent Examiner
Technology Center 2800